

REMARKS

Claims 1-3, 7-10 and 15-16 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent No. 5,583,727 to Parkin in view of IEEE Publication to Paik et al. and IEEE publication to Tani et al. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited references fail to disclose or suggest all of the features of the present invention. More specifically, neither Parkin, the Paik et al. publication, nor the Tani et al. publication disclose or suggest a magnetic recording medium having, *inter alia*, first and second magnetic layers where the first magnetic layer has a larger sum total content of nonmagnetic elements which are other than Cr and which nonmagnetic elements have a larger atomic radius than Co compared to the second magnetic layer, and where the second magnetic layer is “disposed directly on [the] first magnetic layer,” as now defined in independent Claims 1, 8 and 16.

Parkin does not teach or suggest a magnetic recording medium having a magnetic layer with a multi-layer structure, where the multi-layer structure includes at least one second magnetic layer disposed directly on a first magnetic layer. It is essential in the magnetic recording medium of Parkin to provide a spacer layer between two adjacent magnetic layers. For this reason, in Parkin, no magnetic layer is provided directly on another magnetic layer.

Furthermore, Parkin fails to teach or suggest the relationships of the “Cr-content” and the “sum total content of nonmagnetic elements which are other than Cr and

which nonmagnetic elements have a larger atomic radius than Co” for the first and second magnetic layers, as correctly acknowledged by the examiner.

To remedy this deficiency, the Paik et al. publication is cited as teaching the effects of B and Cr concentration on the magnetic properties of CoCrPtB alloys that are deposited onto Al substrates having a Cr underlayer, and the Tani et al. publication is cited as teaching the effects of Pt concentration on the magnetic properties of a CoCrPtB alloy film that is deposited on an Al substrate having a Cr underlayer.

However, both the Paik et al. publication and the Tani et al. publication fail to disclose or suggest a magnetic recording medium having a magnetic layer with a multi-layer structure, where the multi-layer structure includes at least one second magnetic layer disposed directly on a first magnetic layer. Moreover, both the Paik et al. publication and the Tani et al. publication fail to teach or suggest the relationships of the “Cr-content” and the “sum total content of nonmagnetic elements which are other than Cr and which nonmagnetic elements have a larger atomic radius than Co” for the first and second magnetic layers, since both the Paik et al. publication and the Tani et al. publication use a magnetic layer having a single-layer structure.

In addition, according to the present invention, it is possible to realize high coercivity, high recording and reproducing resolution, reduced media noise and high signal-to-noise ratio, even while using a multi-layer structure for the magnetic layer, so that it is possible to carry out high-density recording and reproduction with respect to the magnetic recording medium (for example, see page 5, lines 2-10 of the specification). The Paik et al.

publication and the Tani et al. publication fail to even suggest the effects of the relationships of the “Cr-content” and the “sum total content of nonmagnetic elements which are other than Cr and which nonmagnetic elements have a larger atomic radius than Co” for the first and second magnetic layers of the magnetic layer having the multi-layer structure.

Accordingly, for the reasons discussed above, Applicants respectfully request the withdrawal of the §103 rejection of independent Claims 1, 8 and 16 under the combination of Parkin, the Paik et al. publication and the Tani et al. publication.

Claims 2, 3, 7, 9, 10, and 15 all depend from either independent Claim 1 or from independent Claim 8, and therefore include all of the features of either Claim 1 or Claim 8, plus additional features. Accordingly, Applicants respectfully request that the §103 rejection of dependent Claims 2, 3, 7, 9, 10 and 15 under the combination of Parkin, the Paik et al. publication and the Tani et al. publication be withdrawn considering the above remarks directed to independent Claims 1 and 8

Claims 4, 5, 11, 12, 17 and 18 stand rejected under 35 U.S.C. §103 as being unpatentable over the combination of Parkin, the Paik et al. publication, the Tani et al. publication, United States Patent No. 6,302,217 to Malhotra et al. and United States Patent No. 5,789,056 to Bian et al. Applicants respectfully traverse this rejection.

Claims 4, 5, 11, 12, 17 and 18 all depend from either independent Claim 1 or from independent Claim 8, and therefore include all of the features of either Claim 1 or Claim 8, plus additional features. Accordingly, Applicants respectfully request that the §103 rejection of dependent Claims 4, 5, 11, 12, 17 and 18 under the combination of Parkin, the

Paik et al. publication, the Tani et al. publication, Malhotra et al. and Bian et al. be withdrawn considering the above remarks directed to independent Claims 1 and 8, and also because neither Malhotra et al. nor Bian et al. disclose or suggest the features discussed above with regard to the rejections of Claims 1, 8, and 16, nor were they relied upon for such features.

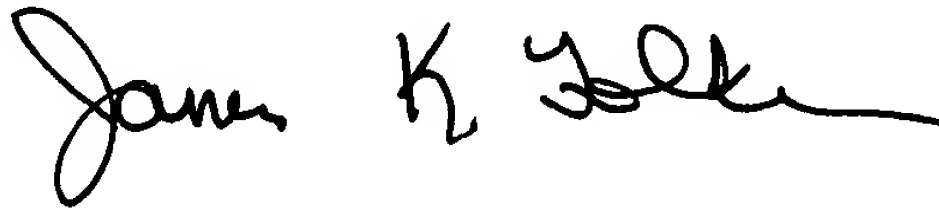
Claims 6 and 13 stand rejected under 35 U.S.C. §103 as being unpatentable over the combination of Parkin, the Paik et al. publication, the Tani et al. publication, Malhotra et al. and Bian et al., and further in view of United States Patent No. 6,150, 015 to Bertero et al. Applicants respectfully traverse this rejection.

Claims 6 and 13 both depend, indirectly, from either independent Claim 1 or from independent Claim 8, and therefore include all of the features of either Claim 1 or Claim 8, plus additional features. Accordingly, Applicants respectfully request that the §103 rejection of dependent Claims 6 and 13 under the combination of Parkin, the Paik et al. publication, the Tani et al. publication, Malhotra et al., Bian et al. and Bertero et al. be withdrawn considering the above remarks directed to independent Claims 1 and 8, and also because the Bertero et al. reference does not disclose or suggest the features discussed above with regard to the rejection of Claims 1, 8 and 16, nor was it relied upon for such features.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By 

James K. Folker
Registration No. 37,538

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Suite 2500
300 South Wacker Drive
Chicago, Illinois 60606
(312) 360-0080

Customer No. 24978

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